

The Examiner stated that Kiriyama "[derives] a second bit rate as a percentage of the first bit rate, changes in which percentages are inversely related to changes in the first bit rate" and that this disclosed in column 6, lines 20-30 and 63-68 of the specification. The Examiner did not specifically address why Applicant's last amendment dated April 14, 2000, failed to overcome this rejection.

Firstly therefore, Applicant would like to take this opportunity to explain an essential difference between the current invention and Kiriyama, as clarified by Applicant's most recent amendment, which amended independent claims 1 and 5 to claim "transmitting the encoded digital video bit stream to a decoder buffer at the second bit rate." In the current invention, the first bit rate, B1, is the bit rate entering the encoder buffer. The second bit rate, B2, is the bit rate leaving the encoder buffer and entering the decoder buffer. B1 and B2 are inversely related, thereby creating a tunable delay to prevent encoder buffer overflow.

Kiriyama, is not a buffer control invention. Kiriyama uses buffer delay to achieve lip synchrony by synchronizing audio and video, which are encoded and decoded at different rates. Accordingly, Applicant can find no statement in Kiriyama regarding the relationship between B1 and B2.

The Examiner, on page 3, lines 1-3 of the Office Action of May 16, 2000, relies upon column 9, lines 63-68 and column 10, lines 1-42 of Kiriyama to derive a relationship between B1 and B2, finding "transmission of the "encoded

digital video data to a decoder buffer at the second bit-rate."

Focusing first on column 10, lines 17-22, which refer to FIG. 5, Applicant respectfully submits that the lines the Examiner cites do not disclose the features of the current invention as claimed. These lines state that "a sum delay of the delay in the buffer memory 39 of FIG. 5 [encoder buffer] plus the additional video delay [decoder buffer] becomes equal to a predetermined video delay threshold value THV", parentheses added. THV is a constant, which ensures audio and video synchrony, and is unrelated to buffer control. Kiriyama states: "[i]n this manner, the read video data are produced from the video buffer memory 71 [signal exiting from the decoder buffer at rate B2 on its way to the decoder] with the sum delay relative to [proportional to] supply of the encoded video signal to the buffer memory 39." Accordingly the rate the Examiner characterizes as B2 exists **exiting from the decoder buffer, not entering the decoder buffer**. This rate is also **proportional** to B1 and not inverse to it.

The present invention, in contrast, "read[s] the encoded digital video bit stream out of the encoder buffer at the second bit rate; and transmit[s] the encoded digital video bit stream to a decoder buffer at the second bit rate" the second bit rate being "a percentage of the first bit rate, which percentage changes **inversely** in relation to changes in the first bit rate."

In the present invention, B2 exists going into the decoder buffer, not exiting from it. This is because the present invention relates to buffer control, not lip synchrony. Lip synchrony depends upon and is a function of the output rate from the decoder, not the input rate to the decoder buffer and therefore Kiriyama does not work in the same manner as the present invention.

Turning now to column 6, lines 20-30, cited by the Examiner, which also refer to FIG. 5. Lines 27-30, state, "Like in FIG. 1, operation of the video encoder 37 is controlled by the video encoder controller 41 to which the buffer memory 39 delivers a buffer occupancy signal BOC representative of its buffer occupancy." Applicant believes the Examiner cites this text to demonstrate that output of the encoder is a result of buffer occupancy.

However, further down in the specification, beginning at line 30, Kiriyama states: "When the buffer occupancy becomes zero while the buffer memory 39 is read out, the video encoder control signal is used to suspend operation of the video encoder 37. In addition, the video encoder 37 may produce the video frame data with data compression as in FIG 1." FIG. 6 shows the BOC at 0. Applicant believes that the BOC is not used to regulate the buffer except when it is at 0. It does not control the rate of encoding. As a binary signal it controls whether or not encoding takes place at all. Therefore, it cannot be used to "derive a second bit rate as a percentage of the detected bit-rate which

percentage changes in inverse relation to changes in the detected bit-rate."

The Examiner also cites column 9, lines 63-68, as the basis for finding that Kiriyama discloses a "buffer read bit rate [which] is a percentage of the detected current rate, which percentage varies inversely in relation to the changes in the detected current bit rate." However, Applicant respectfully submits that upon reading the immediately preceding lines 59-62, it is clear that Kiriyama does not disclose "transmitting the encoded digital video bit stream to a decoder buffer at the second bit rate." These lines, which are to be interpreted with regard to FIG. 8, state: "**From the video buffer memory 71 [decoder buffer], the read video data are read with an additional video delay relative to production of the separated video data from the video processor 65**" (emphasis, parenthetical, and underlining added). Therefore, these lines, cited by the Examiner on page 3, line 3 of the Office Action of May 16, 2000, disclose a signal exiting from the **decoder** which is **proportional** rather than inversely related to the input rate to the encoder, that is, "a sum delay of the delay in the buffer memory 39 of FIG. 5 [encoder buffer] **plus the additional video delay** [decoder buffer] becomes equal to a predetermined video delay threshold value THV." Accordingly, THV is also established as the signal **exits** from the decoder buffer whereas the current invention "transmit[s] the

encoded digital video bit stream to a decoder buffer at the second bit rate."

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Allowable Subject Matter

Accordingly, for the reasons stated above, Applicant respectfully submits that independent claims 1, 5, and 12, and dependent claims 2-4, 6-11, and 14 are allowable over the references of record. Entry of this Amendment, reconsideration of the rejections and allowance of all the claims is respectfully requested.



Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on <u>August 15, 2000</u> <u>Patricia Tomich</u> Patricia E. Gethman Reg. 37,820
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